Amendments to the Claims

This listing of claims will replace all prior listings of claims in the application.

Listing of Claims

Claims 1-10 (Cancelled)

11. (Currently amended) A telecommunications network, comprising:

plural interconnected ~~routers~~ nodes; and

at least one protecting ~~router~~ node in the interconnected nodes comprising a router table, the router table having an entry identifying an alternative route around an adjacent ~~router~~ node to the protecting ~~router~~ node in case of failure of the adjacent ~~router~~ node.

Sub C1

12. (Previously presented) The telecommunications network of Claim 11, in which the router table has an entry identifying a port associated with the alternative route.

B1

13. (Currently amended) The telecommunications network of Claim 11, in which the alternative route includes a cycle of ~~routers~~ nodes directly connected to the adjacent ~~router~~ node and there is associated with each ~~router~~ node in the cycle of ~~routers~~ nodes a routing table with an entry identifying the cycle of ~~routers~~ nodes.

14. (Currently amended) A protecting ~~router~~ node, comprising a router table, the router table having an entry identifying a cycle of ~~routers~~ nodes directly connected to an adjacent ~~router~~ node to the protecting ~~router~~ node, the cycle of ~~routers~~ nodes not including the adjacent ~~router~~ node.

15. (Currently amended) The protecting ~~router~~ node of Claim 14, in which the router table has an entry identifying a port associated with the cycle of ~~routers~~ nodes.

16. ((Currently amended) The protecting ~~router~~ node of Claim 14, in which the protecting ~~router~~ node has a router table in which

is stored, for each adjacent ~~router~~ node to the protecting ~~router~~ node, an entry identifying a cycle of ~~routers~~ nodes directly connected to the adjacent ~~router~~ node to the protecting ~~router~~ node, each cycle of ~~routers~~ nodes not including the respective adjacent ~~router~~ node.

17. (Currently amended) A data packet for a network of ~~routers~~ nodes, the data packet comprising:

an ID field that specifies a cycle of ~~routers~~ nodes in which the ~~routers~~ nodes in the cycle are all adjacent a ~~router~~ node not in the cycle and a data field.

18. (Previously presented) The data packet of Claim 17, further comprising a path cost field.

B1

19. (Currently amended) The data packet of Claim 17, further comprising a field identifying a ~~router~~ node that created the data packet.

20. (Currently amended) A method of protecting against ~~router~~ node failure in a network, in which the network includes plural interconnected ~~routers~~ nodes, the method comprising the step of:

storing at a protecting ~~router~~ node an entry identifying a cycle of ~~routers~~ nodes that form at least one alternative route around an adjacent ~~router~~ node to the protected ~~router~~ node, in which the cycle of ~~routers~~ nodes includes all ~~routers~~ nodes directly connected to the adjacent ~~router~~ node and not the adjacent ~~router~~ node.

21. (Currently amended) The method of Claim 20, further comprising the step of:

upon failure of the adjacent ~~router~~ node, routing all data packets whose preferred path includes the adjacent ~~router~~ node, around the alternative route beginning at the protected ~~router~~ node.

22. (Previously presented) The method of Claim 21, in which the preferred path is the least cost path.

23. (Currently amended) The method of Claim 20, in which each data packet routed around the alternative route contain an ID field that identifies the cycle of ~~routers~~ nodes, a path cost field containing the cost of the least cost path and a data field.

24. (Currently amended) The method of Claim 20, in which each ~~router~~ node in the alternative route has a router table having an entry that identifies the cycle of ~~routers~~ nodes and continues to route the data packet around the alternative route until the path cost from a ~~router~~ node in the alternative route to the destination of the data packet is less than the cost of the least cost path.

25. (Currently amended) The method of Claim 22, further comprising the step of:

at each ~~router~~ node in the cycle of ~~routers~~ nodes, assessing whether to continue on the cycle of ~~routers~~ nodes or leave the cycle of ~~routers~~ nodes at that ~~router~~ node.

26. (Currently amended) The method of Claim 25, in which the assessment is made by assessing the cost of the route leaving the cycle at that ~~router~~ node.

27. (Currently amended) The method of Claim 26, in which the assessment is made by comparing the cost of the route leaving the cycle at that ~~router~~ node with the cost of the route had the ~~router~~ node not failed.

28. (Currently amended) The method of Claim 20, further comprising the step of:

removing data packets from the cycle of ~~routers~~ nodes when data packets have returned to the entry point of the data packet onto the cycle.

29. (Currently amended) A telecommunications network comprising:

plural interconnected ~~routers~~ nodes; and

each ~~router~~ node comprising a router table, the router table having an entry identifying an alternative route around an adjacent ~~router~~ node to the ~~router~~ node in case of failure of the adjacent ~~router~~ node.

30. (Currently amended) A telecommunications network, comprising:

plural interconnected ~~routers~~ nodes; and

each ~~router~~ node being directly connected to a set of protecting ~~routers~~ nodes, each ~~router~~ node in the set of protecting ~~routers~~ nodes comprising a router table, the router table having an entry identifying an alternative route around the ~~router~~ node to which the set of protecting ~~routers~~ nodes is directly connected in case of failure of the ~~router~~ node.